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Applicant: Kanunari Hanano
Application No.: 10/657,978

REMARKS/ARGUMENTS

The present application contains Claims 1-3, 7, 13-15, 19-22, 25-27, 31, 37, 39, 43-46, 49, 50 and 52-54. Claims 1 and 14, 21, 38 and 45 have been amended to cure indefiniteness. Claim 51 has been cancelled without prejudice. Previously withdrawn claims 4-6, 8-12, 16-18, 23, 24, 28-30, 32-36, 40-42, 47 and 48 have been cancelled without prejudice, Applicant reserving the right to file a divisional application.

It is noted that the present action is a final action and is responsive to the communication filed with the Patent Office on December 27, 2005.

It is noted that the drawings filed September 9, 2003 have been accepted and it is further noted that the claim for foreign priority has been acknowledged and that all other certified copies of the priority documents have been received.

Claims 1-3, 7, 13-15, 19, 21, 22, 38, 45, 51 and 52 have been rejected as failing to comply with 35 USC §112, second paragraph. This rejection is respectfully traversed.

The examiner has stated that the limitation in claim 1 which reads "whereby the distance between the outgoing radiation surface and the angle portion converting member are substantially equal" is incomplete as another reference element or elements are required to example what the claimed distance is equal to. Claim 1 has been amended to satisfy this requirement and it is submitted that

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claim 1 now meets the requirements of 35 U.S.C. § 112, second paragraph and that this rejection should be withdrawn.

In view of the fact that in claim 1 now complies with § 112, it is submitted that the rejection of the dependent claims 2, 3, 7, 13-15, 19, 21 22, 35 and 52 should be withdrawn. The rejection of claim 51 is moot as this claim has been canceled.

Regarding claim 14, the examiner states that the limitation which reads "the columnar light leading members configure such that... at the outgoing irradiation end surface and" is confusing. Claim 14 has been amended to provide the proper clarity and it is submitted that claim 14 now complies with § 112. Claims 21, 38, and 45 have been amended in a similar matter and it is submitted that these claims likewise comply with § 112. For these reasons, it is submitted that the rejection of claims 1-3, 7, 13-15, 19, 21, 22, 35, 45 and 52 based on § 112, should be withdrawn.

Claims 1-3, 7, 13-15, 19, 21, 22, 25-27, 31, 37-39, 43, 46, 49 and 50, 51 and 52 have been rejected under 35 U.S.C. § 102(b) as anticipated by Tiao et al. (Patent '669). This rejection is respectfully traversed except for claim 51, which has been cancelled.

Also, since claims 25-27, 31, 37, 39, 43, 44, 46, 49, 50, 53 and 54 have been allowed (see Official Action, page 8) no arguments are presented regarding these claims.

The examiner makes reference to Figure 7A and 8A of Patent '669.

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Making reference to Figure 7A of Patent '669, the incident surface and the outgoing surface are both curved. Note especially Figure 7B showing one integrator 722 in detail. Light emitted from LED 712 is refracted at the curved convex incident surface, converges away from the long sides and toward the central axis and is emitted from the outgoing curved convex surface without being reflected on the side surface of integrator 720. Note especially the light rays in two of the integrators in Figure 7A and in the integrator 722 in Figure 7B. It should be noted that there is no internal reflection along the side surfaces of the integrators 720.

In contrast, the "columnar light leading member" recited in claim 1 of the present application and shown, for example, in any one of the elected species of Figures 9A through 11 are configured to guide light to the outgoing radiation end surface by reflecting at least a part of the light rays collected from the incident end surface, on the reflection surface. Thus, the structure, effect and advantages of the present invention are all different from those of Figure 7A of Patent '669.

Figures 8A and 8B of patent '669 show "wedge glass rod array 820" which admittedly correspond to the "columnar light leading member" set forth in claim 1 of the present application. However, in patent '669, the outgoing radiation end surface of the "wedged glass road array 820" and the surface of the "light valve 850" have a conjugate relationship. The structure of Figure 8A is typically known as a "critical illumination" type structure.

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More particularly, the invention of the present application has an arrangement in which the outgoing radiation end surface of the "columnar light leading member" and the surface of the "irradiation area" (i.e. light modulation element 12) *do not* have a conjugate relationship. For example, noting Figure 3 of the present application it can be seen that the distance between the angle position converting member and a predetermined irradiation area of the present invention is substantially equal to a focal distance of the angle position converting member, and corresponds to Figure 3.

This structure makes it possible to achieve an efficient illumination apparatus as disclosed in the second embodiment.

On the other hand, patent '669 does not disclose or suggest such an effect and advantage.

Claim 1, as amended recites the afore-mentioned relationship. Claims 2, 3, 7, 13-15, 19, 21, 22 and 52 all depend from claim 1 and carry all of its limitations and likewise patentably distinguish over Patent '669.

Claims 1, 13-15, 19-22, 51 and 52 have been rejected under 35 U.S.C. §102(b) as anticipated by Parker (Patent '216). This rejection is respectfully traversed except for cancelled claim 51.

Parker is limited to teaching light pipes 38 provided between light sources 32 and optical integrator 40, and an optical path lens 42. Patent '216 fails to teach an

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angle position converting member configured to convert an outgoing light angle intensity of the outgoing light from the outgoing radiation end surface of the columnar light leading member into a position intensity in a predetermined irradiation area. Claims 13-15 and 19-22 all depend from claim 1 and it is submitted that all of these claims patentably distinguish over Patent '216.

Also, claim 1, as amended, recites the distance between the angle distance converting area and the predetermined radiation area is equal to a focal distance of the angle position converting member, which is not found in patent '26 and which lacks the advantages of the embodiment recited in claim 1 set forth above in responding to the rejection based on patent '669.

Claims 13-15, 19-22, and 52 depend from claim 1 and are also patentable.

In view of the foregoing, it is submitted that claims 1-3, 7, 13-15, 19-22, are now allowable and reconsideration and allowance of these claims, together with allowed claims 25-27, 31, 37-39, 43-46, 49, 50, 53 and 54, are respectfully solicited.

The Examiner is invited to contact the undersigned on behalf of the applicant to resolve any issues which may require further resolution with a view to expediting the prosecution.

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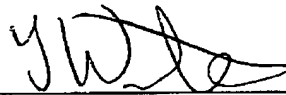
In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application, including claims 1-3, 7, 13-15, 19-22, 25-27, 31, 37-39, 43-46 and 49, 50 and 52-54, is in condition for allowance and a notice to that effect is respectfully requested.

Favorable action is awaited.

Respectfully submitted,

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Enclosures